



# National Center for Telehealth & Technology – Joint Base Lewis-McChord; Tacoma, WA

### Mission

Lead the development of telehealth and technology solutions for Psychological Health and Traumatic Brain Injury to improve the lives of our Nation's Warriors, Veterans, and their families.

### Vision

Technology to Make People Healthy-

Our Nation's Warriors, Veterans, and their Families will have improved lives through access to and use of tested interventions to prevent, treat and mitigate the adverse psychological health and TBI sequelae of war.





# Defense Centers of Excellence (DCoE) – BG Loree Sutton



DCoE assesses, validates, oversees and facilitates prevention, resilience, identification, treatment, outreach, rehabilitation, and reintegration programs for psychological health and traumatic brain injury to ensure the Department of Defense meets the needs of the nation's military communities, warriors and families.







## Welcome to afterdeployment.org



# afterdeployment.org

Wellness resources for the military community.

Our mission is to help service members and their loved ones manage the challenges that are often faced following a deployment



## **Population & Prevention Programs: Vision**

Supporting the military through web-based and other technologies and by developing, coordinating, and expanding innovative population and preventive healthcare solutions.





## Agenda

- Project origin and charter
- Identified needs
  - ✓ Address post-deployment behavioral health issues
  - ✓ Address barriers to care
- Solution
  - ✓ afterdeployment.org: Self-guided internetbased self-care model
- Current website features
- Next generation



## **Project Origin and Charter**

National Defense Authorization Act (NDAA) FY 2006, 2007 (H.R. 1815), Title Vii, Subtitle C, Sections 721(b) & 722 directed the DoD Military Health System to:

- Establish pilot projects to evaluate the effectiveness of interactive mental health material made available to members of the Armed Forces, their Families, and Veterans, as well as military and civilian health care providers.
- Improve the capability of the military health system to provide early diagnosis and treatment of Post-Traumatic Stress Disorder (PTSD) and other behavioral conditions.



### **Program Partners / Stakeholders**

- VA National Centers for PTSD
- Army Medical centers: Tripler, Madigan, Brooke
- AMEDD Center / School Pastoral Ministry Training
- TRICARE Management Activity, Health Affairs
- National Center for PTSD

- Real Warriors Campaign
- Defense and Veterans Brain Injury Center
- National Center for Deployment Psychology
- Center for Health Promotion / Preventive Medicine

Audience: All Service Branches, Reserves, National Guard, Family Members, Veterans, Providers











## **Identified Needs**





# Over 20% of returning Service Members experience:

- ⇒ Sleep problems
- ⇒ Stress
- ⇒ Depression
- ⇒ Anger
- ⇒ Substance abuse
- ⇒ Relationship issues

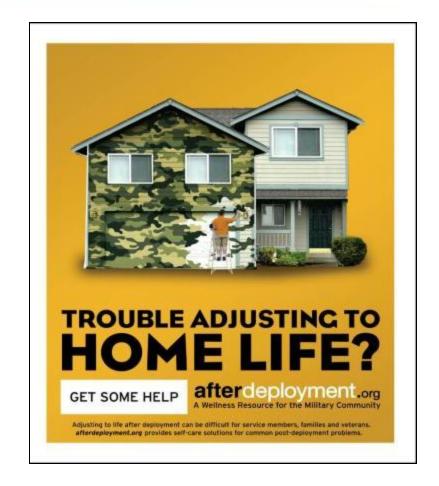


### **Barriers to Care**

While post-deployment adjustment problems are **normal...** 

Service members do not seek face-to-face care because of personal and/or situational *barriers...* 

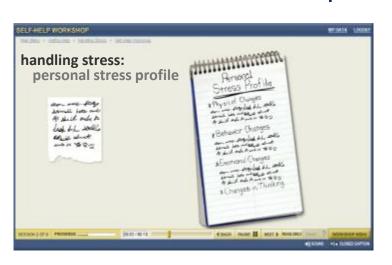
...And the **stigma** associated with receiving care.

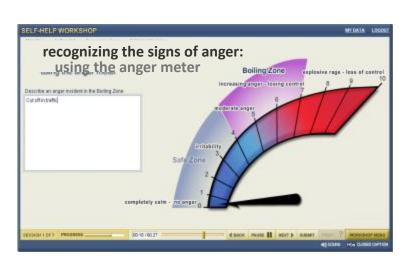


### Solution:afterdeployment.org:

### A Web-based Platform offering a Self-Guided Care Model

- Advantages of online resources:
  - Accessible 24/7/365
  - Private
  - Self-paced/Self-Guided
  - Stand-alone or augment to care
  - Decreases stigma/barriers
  - Provides resources for the entire military community
  - Resources for providers





### **Website Features Prior to Enhancement**

- Twelve topic areas addressing important post deployment issues
- Inclusion of material for families and Veterans
- Assessments in each topic area with interpretive feedback
- Self-guided linear workshops
- Personal stories
- Fact sheets addressing each topic
- Links and Books for further reference





### **New Website Features**



- Increase from 12 to 18 Topic Areas
- Banner links to core resources
- Learning Management System (LMS)
- New search functionality and site map
- Geolocator
- Multimedia-based presentation
- Health tips / Mind Flex / Daily Quotes
- RSS Feeds
- Podcasts
- Prominent feedback mechanism
- Links to Facebook and Twitter
- Capacity to Poll user opinion
- Additional and updated assessments
- Dashboard summary of user's progress
- Portal Customization
- Community forums and expert blogs



## **Provider Portal**



- Professional development courses
- Directions and Guidelines for using AD materials as adjunct to direct clinical care
- LMS CE credit
- Clinical Practice Guidelines
- Resilience/self-care
- Provider feedback survey
- Communities: List Serve
- References/ articles/ research
- Expert blogs



## **Topics**



Post-Traumatic Stress



Depression



Anger



Sleep



Families & Friendships



Anxiety



Alcohol & Drugs



Tobacco



Physical Injury



mild Traumatic Brain Injury



Life Stress



Stigma



Resilience



Military Sexual Trauma



Health & Wellness



Families with Kids



Spirituality



**Work Adjustment** 



## afterdeployment.org: New Topic Areas

- Adjusting to War Memories
- Dealing with Depression
- Handling Stress
- Overcoming Anger
- Improving Relationships
- Succeeding at Work
- Sleeping Better
- Controlling Alcohol and Substances
- Helping Kids Deal with Deployment
- Seeking Spiritual Fitness
- Living with Physical Injuries
- Balancing Your Life

- Post-Traumatic Stress
- Depression
- Life Stress
- Anger
- Families and Friendships
- Work Adjustment
- Sleep
- Alcohol and Drugs
- Families with Kids
- Spirituality
- Physical Illness
- Health and Wellness
- mild Traumatic Brain Injury (mTBI)
- Resilience
- Military Sexual Trauma
- Stigma
- Tobacco
- Anxiety

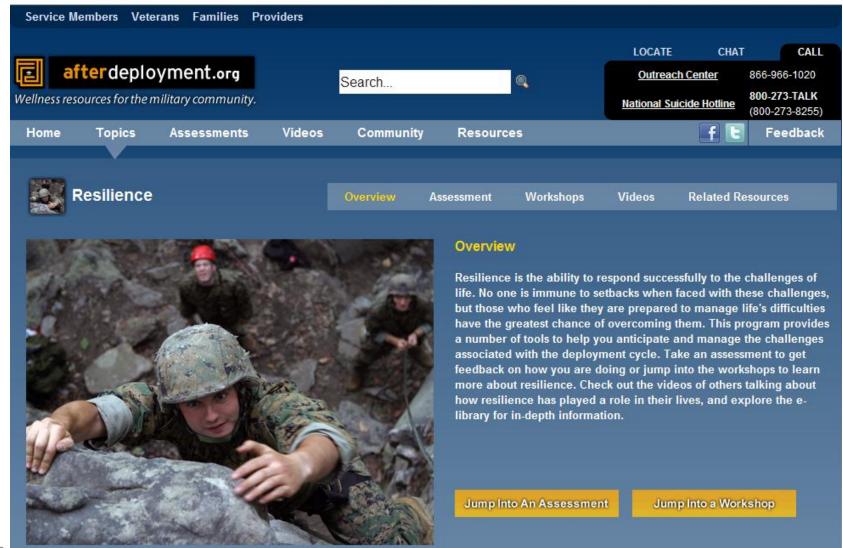


## **Overview of Workshops**

- ✓ Design is based on theories associated with stages of change and readiness to change health related behavior
- ✓ Self paced.
- ✓ Information and practice to create behavior change.
- ✓ Information presented through video documentaries and experiential exercises.
- ✓ Hands-on exercises for users ready to put effort into the change process.



## Resilience Topic Page



## **Program Tools: Documentary Workshops**

#### Developing and Maintaining Relationships

- Assertiveness in Personal Relationships
- Conflict Resolution

#### Resilient Personal Qualities

- Optimism
- Forgiveness
- Gratitude
- Generosity
- Personal Values

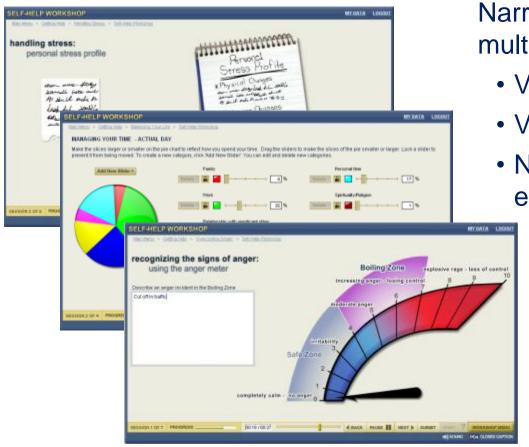
#### Skills

- Goal Setting
- Time Management
- Problem Solving





## **Program Tools:** Exercise Workshops



Narrator-guided, interactive and multimedia-based:

- Vignettes
- Videos
- Numerous skill-based exercises

#### Example exercises

- Handling Stress workshop: users are guided through a deep-breathing exercise
- Overcoming Anger workshop: users learn to monitor their mood on an anger meter selfrating scale.



## Overview of Self-Assessments

Assessments are powerful educational tools. Users are encouraged to choose evaluations based on the results of previous assessments or on their personal sense of what's important to them. No data can be traced to individual users.

- ✓ All 28 assessments have been chosen based on the availability of psychometric data.
- ✓ Scales originally developed for afterdeployment that lacked psychometric research have been replaced.
- ✓ When possible, the interpretive feedback provided to users was reviewed or authored
  by the scale's developers.
- ✓ Some scale developers have expressed interest in receiving data developed on afterdeployment.org and developing research collaborations with T2.
- ✓ All scales will be available for review in the Provider Portal, including references to publications associated with the scales' development and recommendations for use in tandem with clinical practice.
- ✓ Users of the assessment tools are encouraged to print and share their results with their healthcare professional when appropriate.

## **Program Tools:** Self Assessments



- User's score provided within an acuity continuum, from low to moderate to high.
- Users receive immediate feedback on results and recommendations



## **Program Tools: Personal Stories**

Videos of Service Members, Veterans, and Family Members as they discuss their post-deployment challenges



Post -Traumatic Stress Service Member discusses how keeping a journal helped him during his deployment



Health & Wellness Service Member discusses how she balances work-life issues during and after deployment



Depression
Service
Member's wife
discusses how
she dealt with
loneliness during
her husband's
deployment



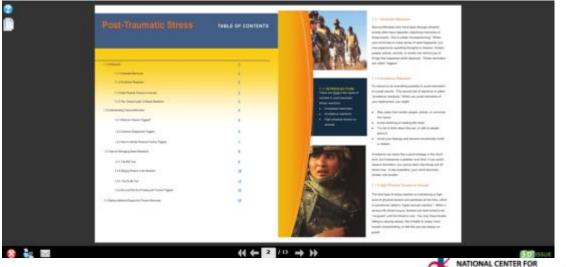
Stress
Service Member
discusses how
days vary in terms
of stress and
emotions while on
deployment



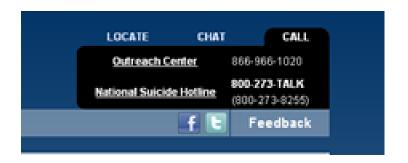
## **Program Tools:** Electronic Library

- Comprehensive electronic libraries offer a mixture of multimedia and text
- Each e-Library is introduced by a subject matter expert
- 300+ pages of psychoeducational materials which can also be printed.

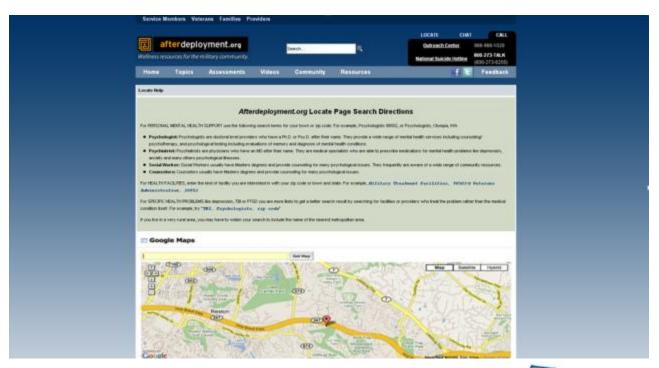




## Resources & Support



Prominent CALL, CHAT and LOCATE feature for addressing acute concerns





## Next Generation: Online Coaches

Online Video-Based Coach provides engaging human interface between user and psychological content and promotes 'connection' between user and content

#### 2010 Applications:

- Video-based guides introduce assessments and provide tailored feedback
- Video-based guides introduce workshops and provide ongoing coaching during workshop didactics, vignettes, exercises, and practice assignments

#### Future Application: 'Avatar':

- Natural language interaction
- Site orientation/ 'concierge' function
- Avatar directs user to tailored content
- Avatar assists user with treatment planning
- 'Rapport-building' with repeated user visits

#### Provider / Coach in Face-to-Face Settings

 Future clinical/ research applications: engage website materials in tandem with face-to-face clinical services







# **Next Generation:** afterdeployment.org "Beyond the Desktop"

### Mobile afterdeployment.org

Web servers can detect if a page request is from a desktop or mobile device. Most of today's smartphones (Blackberry, iPhone, Droid) have web browsers onboard.







## Mobile Applications

#### Website

afterdeployment.org

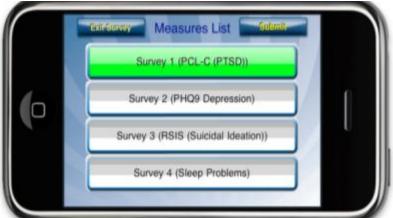
#### Assessment/ Surveillance

Automated Tools and Outcome Measures (ATOM)

#### Clinical Tools

- Hope Box
- iBreathe
- Mood Tracker
- 'There & Back' podcasts







### *i*Breathe

- Downloadable application from iTunes or Android Marketplace for SmartPhone
- Contains breathing retraining for both adults and children
- Known and widely used intervention (diaphragmatic breathing)
- Utilize inherent technology to better refine rehearsal of skills (biofeedback)



# The *i*Breathe Trainer: Adult Version







- Video Tutorial
  - Video guide demonstrates "belly" breathing
- Stress assessment
  - Stress Visual Analogue Scale quick pre/post-exercise metric
- Options:
  - Background/skins and additional visual images (e.g. candle flickering, beach scene, expanding/collapsing balloon)
  - Audio additional voices for guides, natural ambient sounds (e.g. rain, birds chirping, pan flute)
  - Adjust pace/speed Can slow down the rate of the breathing exercise to better fit user's preferences
  - Increase/Decrease Repetitions user can adjust the number of breathing cycles
  - Track progress

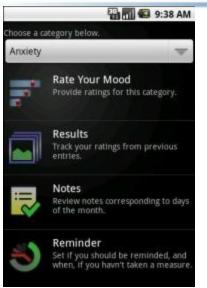


### **Telehealth Mood Tracker**

- A smart phone application to allow individuals to easily self-monitor moods and behaviors associated with common post-deployment behavioral health issues.
- •Designed to be used as an adjunct to face-to-face treatment allowing users and health care providers to evaluate trends in emotional experience over time.



### **Telehealth Mood Tracker**





Calm

Calm

Apr 30

Pressured

Untroubled Worried

Calm

Pressured

Relaxed Tense

- •Visual analogue scale allows for quick and easy self-monitoring of affective states.
- Preloaded scales evaluating moods and behavior associated with posttraumatic stress, anxiety, brain injury, life stress, depression.
- Capacity to attach notes to each rating indicating environmental influence on rating.
- Graphing of results over time to identify trends.
- Email ratings to health care provider.

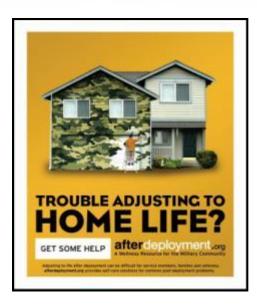
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Development of custom scales.

## **Getting the Word Out**









- Quarterly Newsletter
- Full-page color advertisement published in USO's "On Patrol" magazine. "On Patrol" reaches nearly 300,000 service members worldwide.
- Public Service
   Announcement (PSA) on the American Forces
   Network (AFN).
- afterdeployment.org podcasts available from the site as well as iTunes
- External social networking on Facebook and Twitter



## **User Feedback**

"afterdeployment.org is saving my marriage." (spouse)

"I like this one because it seems to relate more to me, my family and our experience as a military family." (family member)

"There is a lot to visit on this site, with many resources offered. I would sit down with my family to go through this site; even if we were in separate places I'd feel that we could go through this one together." (service member)

"Everyone goes through a lot when service members are deployed. It's good to have resource like this and support for everyone involved." (service member)

"...the videos, dealing with numerous different subjects, are affirmation that someone else has also experienced some of what the person may be going through. I think that these can be very self assuring." (family member)



What did you like the most about the site?

"That someone even cared enough to build it."
(Service Member)



## **Questions?**



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